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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/544,865

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EXAMINER

BLOUNT, STEVEN

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/544,865

Applicant(s)

YEUNG, PAULINE SAI-FUN

Examiner

Steven Blount

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 - 10 is/are allowed.
- 6) ☒ Claim(s) 11 - 18 is/are rejected.
- 7) ☒ Claim(s) 19 - 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,991,520 to Smyers et al in view of U.S. patent 4,682,284 to Schrofer.

With regard to claim 11, Smyers et al teaches a system for processing packets in a bus switch, wherein the system comprises:

Means 30 for storing data in data in queues; means for selecting the appropriate queue for each set of incoming data based on the cycle based on a cycle number in which the set of data arrive, wherein the said selecting means in Smyers et al comprises the use of a circular, linked list of buffers 30; means for directing the data to the appropriate queuing means as discussed in col 6 lines 15+, and a flushing means, as described in col 7 lines 20+. Smyers et al do not, however, teach their system to process this data during one cycle. This is taught in Schrofer. See col 10, lines 5+. Schrofer also teaches a queue validity checking means. See col 7 lines 65+, col 8 lines 9+, col 9 lines 40+, and col 11 lines 40+. It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Smyers with a validity checking method, as well as the consequent processing of data in one cycle, in light of the teachings of

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Schrofer, in order to provide a system capable of correcting for skew and also providing a validity check of the data being buffered in an effective manner.

With regard to claim 12, isochronous packets are taught in Smyers et al. See col 6 line 16, for example.

With regard to claim 13, Smyers et al teach processing packets in a IEEE 1394 bus, comprising the steps of selecting a buffer to be flushed based on a "cycle number", where the cycle number in Smyers consists of reading out data from buffers utilizing a circular, linked list of buffer descriptors in a cyclical manner. See col 6, lines 5+, lines 16+, lines 40 – 43, and also col 7, lines 4+. Smyers also teaches that at least one isochronous packet is received over a bus 28, and placed in a data buffer based on the current cycle of the circular, linked list. See col 6, lines 21 – 23, col 6 lines 38+, and col 7, lines 15+. Smyers et al do not, however, explicitly teach that the above occur during a cycle (ie, during a single cycle).

Schrofer teaches reading/writing to occur during a single cycle. See col 10, lines 8 to 15. Schrofer also teaches the use of a method for determining whether the validity of a request stored in a queue is valid, and if not, freeing the location. See col 7 lines 65+, col 8 lines 9+, col 9 lines 40+, and col 11 lines 40+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided a validity checking/freeing method with its associated one cycle read/write operation to the isochronous packet processing method of Smyers, in light of the teachings of Schrofer, in order to provide a

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means for ensuring the data in the buffers is of the proper integrity and effectuate the transfer of data across the bus.

With regard to claim 14, Smyers teaches the use of a bus.

With regard to claim 15, a 1394 bus is taught in Smyers.

With regard to claim 16, three queues are taught in Smyers (see member 20), and note that one of ordinary skill in the art would find it obvious to associate "ports" with the bus interface 40 associated with member 28.

With regard to claim 17, the queues operating in a egress manner in Smyers (see member 30) store data to be processed.

With regard to claim 18, one of ordinary skill in the art would find it obvious to use 4 queues instead of three.

3. Claims 1 – 10 are allowed. Claims 19 – 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to include the limitations of the base claim and any intervening claims.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 571-272-3071. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Chau Nguyen, can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ajit Patel
Primary Examiner

SB



5/2/05